

REMARKS

The only issues outstanding in the Office Action mailed September 15, 2008, are the objection to the claims as containing non-elected subject matter, and the rejection under 35 U.S.C. 103. Reconsideration of these issues, in view of the following discussion, is respectfully requested.

Election of Species

It is acknowledged, as noted at page 4 of the Office Action, that prosecution is currently limited to the elected species. However, inasmuch as it is indicated in this passage of the Office Action that the Applicant will be entitled to rejoinder in consideration of the non-elected species upon the allowability of the generic claims, Applicants respectfully decline to cancel the non-elected subject matter. It is submitted that the objection will be resolved in accordance with Markush claim procedure, once the claims are allowed.

Rejection Under 35 U.S.C. 103

Claims 1-3 and 6-8 remain rejected under 35 U.S.C. 103 over Zhou taken with MacFarlane. Reconsideration of this rejection is once again respectfully requested. All compounds disclosed in Zhou are imidazolium derivatives. It is again argued in the Office Action, however, that modification of these compounds to pyrrolidinium compounds would be obvious in view of MacFarlane, as the “disclosed salts have similar thermal behavior such as melting point, viscosity, water miscibility, etc.,” and “one of ordinary skill would be motivated from this disclosure to pair other cations within their technical grasp (e.g. pyrrolidinium) for the purpose of making additional ionic liquids.” Applicants respectfully, albeit quite strongly, continue to disagree with this analysis. In addition to the absence of a close structural similarity, a strong factor suggesting that no presumption of prima facie obviousness exists, one of ordinary skill in the art has absolutely no basis to predict whether the diverse compounds would retain desirable properties, or lose them, with a significant structural modification to the cation. No rationale is given in the Office Action why one of ordinary skill would pair other structurally

diverse cations “within their technical grasp.” Indeed, such random selection of possibilities fails to constitute obviousness, as the Federal Circuit clearly has stated numerous times. For example, in *In re Jones*, 958 F.2d 347, 21 U.S.P.Q. 2d 1941 (Fed. Cir 1992), the Court found that a disclosure is a primary reference of an anion to be used with “ammonium salts” as cations and a secondary reference’s disclosure of a specific ammonium salt, did not constitute a suggestion of the use of that salt in combination with the anion of the primary reference simply because the cation has a known “ammonium salt” from the vast body of such known salts. Thus, no modification of Zhou is obvious in view of MacFarlane simply because one arguably knows of the MacFarlane cation.

Moreover, MacFarlane merely compares imidazolium dicyanamides and pyrrolidinium dicyanamides with respect to their viscosity. The article teaches that 1-ethyl-3-methylimidazolium dca has a viscosity of 21 cP in comparison to N-butyl-N-methylpyrrolidinium dca with 50 cP. This comparison provides no motivation for one of ordinary skill in the art to substitute imidazolium with pyrrolidinium compounds in the primary reference. In addition to the lack of structural obviousness and the lack of motivation to make such a significant change as above, the presently claimed compounds are again submitted to possess unexpectedly advantageous properties, which clearly eliminate any prima facie case of obviousness. It was clearly not predictable that the electrochemical window of pyrrolidinium pentafluorethyltrifluoroborate (-3 to +4 as seen from Fig 1 of the present application) would be larger than the disclosed electrochemical window of 1-ethyl-3-methylimidazolium pentafluoroethyl trifluoroborate (-2.5 to + 2.5: Fig. 4 of Zhou et al., page 474). The Office Action is predicated on the theory that the cations would have equivalent effect, which is shown not to be accurate. However, the present Office Action argues that these unexpected results are “not statistically significant”, although no reasons for this conclusion are given. Attention is directed to the attached Declaration Under 37 C.F.R. 1.132, explaining from an expert in the art why the previous discussion of unexpected results is, in fact, statistically significant. In particular, the Declaration explains that the method used to determine the values has considerable statistical accuracy, so that the improvement shown can be judged as a real improvement.

In addition, the present Declaration puts into context the considerable importance of the

unexpected increase in stability disclosed from the materials presently claimed. Such increase in stability cannot be neglected by the Examiner, inasmuch as it represents a considerable and needed improvement, as explained in the Declaration. Accordingly, it is again respectfully maintained that ample basis to withdraw the rejections of record exists, and the same is respectfully requested.

Inasmuch as the claims of the application are now submitted to be allowable, it is submitted that the search must be extended in accordance with proper Markush practice. The same is respectfully requested.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,

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